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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,911

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EXAMINER

DIETRICH, JOSEPH M

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/519,911	Applicant(s) NAGATA ET AL.	
	Examiner Joseph M. Dietrich	Art Unit 3762	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The amendments to the drawings are accepted and the objections withdrawn.

### ***Specification***

2. The amendments to the disclosure are accepted and the objections withdrawn.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11, 12, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by the English translation of Satoko Sato (Japanese Patent 6-205751).

Regarding claims 11 and 12, Sato discloses an electrocardiogram (ECG) analysis device for analyzing an ECG (e.g. paragraph 6, lines 2 – 6), and a method for: analyzing level (or magnitude) of an ECG feature value (e.g. paragraph 8, lines 3 – 6); determining disease information relating to a patient's disease based on information including the feature value (e.g. paragraph 30, lines 1 – 5); outputting both the feature value analysis result and the disease information result (e.g. paragraph 19, lines 2 – 4; paragraph 30, lines 1 – 5); wherein the CPU further displays or the outputting step further comprises a chart that relates the feature value analysis result corresponding to each portion of the heart (e.g. paragraph 44, lines 1 – 5; Tables 4 and 5).

Regarding claim 15, Sato discloses a method for analyzing an ECG comprising

the step of analyzing the ECG by combining an algorithm for analyzing level of an ECG feature value and an algorithm for determining whether a patient's cardiac function is abnormal, which is based on information including the feature value (e.g. paragraphs 27 and 30)

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 2, 7 – 9, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over the English translation of Satoko Sato (Japanese Patent 6-205751).

Regarding claims 1 and 2, Sato discloses the claimed invention (as described in claims 11 and 12) except for the chart used is in a radar chart form. Radar charts are well known in the art. It would have been obvious to one having ordinary skill in the art

at the time the invention was made to modify the chart as taught by Sato with a chart in radar chart for as is well known in the art, since such a modification would provide the predictable results of allowing a physician to easily and efficiently view a visual representation of the data collected for each portion of the heart.

Regarding claim 7, Sato discloses the feature value is based on the constituent elements of an ECG including P wave, Q wave, R wave, S wave, ST segment, or T wave (e.g. paragraph 3, lines 3 – 4; paragraph 4, lines 5 – 8).

Regarding claim 8, Sato discloses the disease information determining means determines the disease information based on the Minnesota code as an ECG classification reference (e.g. paragraph 30, lines 1 – 5).

Regarding claim 9, Sato discloses outputting heartbeat-related information by sound and/or varying display style during analyzing the ECG (e.g. paragraph 51, lines 1 – 3).

Regarding claim 16, Sato discloses the disease information determining means displays the information (e.g. column 30, lines 1 – 5), but fails to teach that the disease information is displayed on the radar chart. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display as taught by Sato with a chart in radar chart for as is well known in the art, since such a modification would provide the predictable results of allowing a physician to easily and efficiently view a visual representation of the disease information for each portion of the heart.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato as applied to claim 1 above, and further in view of the English translation of Dainippon Pharmaceutical Co. (Japanese Patent 2001-8914).

Regarding claims 5 and 6, Sato discloses the claimed invention except for outputting history of the feature value analysis result and/or history of the disease information result, and history summary when outputting the feature value analysis result. Dainippon Pharmaceutical Co. discloses outputting history of the feature value analysis result and/or history of the disease information result, and history summary when outputting the feature value analysis result (e.g. paragraph 13, lines 1 – 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the outputting of the feature value analysis result as taught by Sato with outputting the history and the history summary as taught by Dainippon, since such a modification would provide the predictable results of allowing a physician to quickly and efficiently compare the current readings with past events.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato as applied to claim 1 above, and further in view of Patton et al. (U.S. Patent 4,989,610).

Regarding claim 9, Sato discloses the claimed invention except for outputting heartbeat-related information by sound and/or varying display style during analyzing the ECG. Patton discloses outputting heartbeat-related information by sound and/or varying display style during analyzing the ECG (e.g. column 45, lines 37 – 39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the outputting heartbeat-related information as taught by Sato with

outputting the information by sound and/or varying display style, since such a modification would provide the predictable results of facilitating the physician in recognizing changes in the heartbeat-related information.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato as applied to claim 1 above, and further in view of Donehoo et al. (U.S. Patent 5,788,644).

Regarding claim 10, Sato discloses the claimed invention except outputting a warning signal when the analysis cannot be executed during analyzing the ECG. Donehoo discloses outputting a warning signal when the analysis cannot be executed during analyzing the ECG (e.g. column 3, lines 64 – 66). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention as taught by Sato with an alarm as taught by Donehoo, since such a modification would provide the predictable results of alerting a physician of any problems with the invention.

11. Claim 13 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato.

Regarding claim 13, Sato discloses a method for analyzing an ECG comprising the steps of: analyzing magnitude of an ECG feature value (e.g. paragraph 8, lines 3 – 6); determining disease information relating to a patient's disease based on information including the feature value (e.g. paragraph 30, lines 1 – 5); narrowing down the candidates of disease information result based on the feature value analysis result (e.g. paragraph 30); outputting the narrowed disease information result candidates (e.g. paragraph 19, lines 2 – 4; paragraph 30, lines 1 – 5); wherein the outputting step further

comprises a chart that relates the feature value analysis result corresponding to each portion of the heart (e.g. paragraph 44, lines 1 – 5; Tables 4 and 5). While Sato does not explicitly state narrowing down the information, the information must have been narrowed down by the invention in order to determine the correct output out of the numerous possible outputs. In the alternative, it would have been obvious to one having ordinary skill in the art at the time the invention was made to narrow down the information result based on the feature value analysis result, since narrowing down from a large number of possible outputs to the correct outputs known and would provide the predictable results of providing an accurate output.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of the partial English translation of Fujitsu Ltd. (Japanese Patent 55-69896).

Regarding claim 14, Sato discloses the claimed invention except for determining different disease information than the determined disease information by considering both the feature analysis result and the determined disease information result. Fujitsu Ltd. discloses determining different disease information than the determined disease information by considering both the feature analysis result and the determined disease information result (Fujitsu, page 4, line 20 – page 5, line 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the outputting step as taught by Sato with outputting other disease information as taught by Fujitsu Ltd., since such a modification would provide the predictable results of allowing the physician to use a greater number of disease information when diagnosing the patient.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miwa (U.S. Patent 6,196,974) teaches that it is known to use radar charts while determining parameters related to the heart (e.g. Fig. 6).

Masuda et al. (U.S. Patent 6,322,516) teaches that it is known to use radar charts while determining parameters related to the heart (e.g. Fig. 5).

Yoshimura (U.S. Patent Application Publication 2001/0053883) teaches that it is known to use radar charts associated with health indicators (e.g. Fig 3(A)).

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

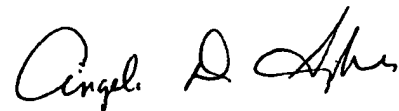
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph M. Dietrich whose telephone number is 571-270-1895. The examiner can normally be reached on Mon - Fri, 8:00AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMD  
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12/19/07



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